IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:		Atty. Docket No.:	004770.01910
Stefano FACCIN et al.			
Serial No.:	09/758,267	Group Art Unit:	2616
Filed:	January 12, 2001	Examiner:	Ian N. Moore
For:	COMMON CHARGING IDENTIFIER FOR COMMUNICATION NETWORKS	Confirmation No.	4056

CORRECTED APPEAL BRIEF UNDER 37 CFR 41.37

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Sir:

This is a corrected Appeal Brief in support of Appellant's July 9, 2007, Notice of Appeal, and is in response to the Notification of Non-Compliant Appeal Brief mailed on April 8, 2008. Appeal is taken from the final office action mailed January 12, 2007. Please charge any necessary fees in connection with this Corrected Appeal Brief to our deposit account no. 19-0733.

REAL PARTY IN INTEREST
37 C.F.R. § 41.37(c)(1)(i)

The real party in interest in this appeal is Nokia Corporation, of Espoo, Finland, the assignee of the present application, as evidenced by an Assignment recorded on July 11, 2001 at Reel 011969 and Frame 0035.

RELATED APPEALS AND INTERFERENCES

37 C.F.R. § 41.37(c)(1)(ii)

On information and belief, there are no other related appeals or interferences which will directly affect, or be directly affected by, the Board's decision in the pending Appeal.

STATUS OF CLAIMS

37 C.F.R. § 41.37(c)(1)(iii)

Claims 1-6, 8-19, 22 and 24-32 in the application are allowed. Claims 7, 20, 21, 23 and 33-37 are cancelled. Claims 38 and 39, reproduced in the **Claims Appendix**, are pending and were finally rejected by the Examiner in the Office Action dated January 12, 2007. The Notice of Appeal appealing said final rejection of claims 38 and 39 was filed on June 9, 2007.

STATUS OF AMENDMENTS

37 C.F.R. § 41.37(c)(1)(iv)

An Amendment was filed subsequent to the final rejection, on May 12, 2007. The Advisory Action dated May 24, 2007, indicated that the Amendment will be entered for purposes of appeal. The Amendment corrected a typographical error in Claim 38 and does not affect the issues in this appeal.

SUMMARY OF CLAIMED SUBJECT MATTER

37 C.F.R. § 41.37(c)(1)(v)

Each one of claims 38 and 39 is directed to a network element for use in coordinating charging information in a communications network. Figure 2 is a generalized block diagram of an architecture of a packet switched wireless communication network in which example embodiments of the claimed subject matter can be practiced. The claims recite a transport layer network, and an application layer network (as part of the architecture of an IP-based telephony network), which are part of the illustration in Fig. 2 of the drawings. See, for example, page 12, line 5, to page 14, line 5, of the specification. As described therein, an application layer network can provide the same service with different transport layer networks, and with different transport bearers. The transport layer network and application layer network are thus defined to be independent of each other, with each network comprising different network elements.

The invention of independent claim 38 recites a network element for use in coordinating charging information. Fig. 2 (GGSN or CSCF); page 12, lines 5-14; page 13, lines 11-17; page 17, lines 3-11 and 16-18; page 18, lines 10-17; page 21, lines 4-8. The network element is configured to create call records (page 12, lines 5-9 and 15-17; page 17, lines 3-6 and 16-18; page 18, lines 10-15; page 21, line 22 - page 22, line 2) and a charging identification (page 7, lines 1-3; page 15, lines 3-4; page 18, lines 6-7; page 21, lines 11-13) for use in one of an application layer network or a transport layer network (page 4, lines 3-4; page 7, lines 13-16; page 12, lines 5-6; page 13, lines 7-21; page 14, lines 1-5 and 9-12; page 16, lines 11-14; page 17, lines 3-8; page 18, lines 10-15; page 21, line 21 - page 22, line 2) for a communication network (Fig. 2) having a billing system (page 14, lines 9-12; page 16, lines 11-14; page 18, lines 10-15) wherein a first connection is established in the application layer network by a user equipment (Fig. 2 (TE and MT)) using a call control protocol and a second connection is established in the transport layer network (page 13, line 22 - page 14, line 5) by said user equipment. The network element is also configured to include the charging identification in the call records thereof (page 17, lines 3-11 and 16-18; page 18, lines 10-15; page 21, line 19 - page 22, line 2); send said call records to said billing system (page 14, lines 9-12; page 16, lines 11-14; page 18, lines 10-15); and send said charging identification so as to be used by a further network element in the other one of the application layer network or the transport layer network (page 7, lines 1-3; page 16, lines 17-19; page 17, lines 8-11), to enable charging information for the elements to be coordinated (page 17, lines 3-6; page 21, lines 4-7; page 21, line 19 - page 22, line 2).

The invention of independent claim 39 also recites a network element for use in coordinating charging information. Fig. 2 (SGSN or GGSN); page 13, lines 10-17; page 17, lines 3-6 and 16-18; page 18, lines 10-17; page 21, lines 4-8; page 21, line 19 - page 22, line 2; page 22, lines 20-23; page 23, lines 11-12; page 25, lines 4-5. The network element is configured for use in one of an application layer network or a transport layer network (page 4, lines 3-4 and 12-15; page 7, lines 13-16; page 13, lines 10-19; page 14, lines 9-12; page 16, lines 11-14; page 21, lines 4-8) for a communications network (Fig. 2) having a billing system (page 14, lines 9-12; page 16, lines 11-14; page 18, lines 10-15) wherein a first connection is established in the application layer network by a user equipment (Fig. 2 (TE and MT)) using a

call control protocol and a second connection is established in the transport layer network (page 13, line 22 - page 14, line 5) by said user equipment. The network element is configured to create call records for said second connection in said transport layer network (page 17, lines 3-6 and 16-18; page 18, lines 10-11; page 21, line 22 - page 22, line 2; page 22, lines 20-23; page 23, lines 11-12; page 25, lines 4-5); send said call record to said billing system (page 14, lines 9-12; page 16, lines 11-14; page 18, lines 10-13); and receive said charging identification from a further network element operable in the other one of the application layer network or the transport layer network (Fig. 2 (TE and MT, or CSCF); page 7, lines 1-3; page 8, lines 7-9; page 23, lines 14-21), to enable charging information for the elements to be coordinated (page 17, lines 3-6; page 21, lines 4-7; page 21, line 19 - page 22, line 2; page 25, lines 4-6).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

37 C.F.R. § 41.37(c)(1)(vi)

Claims 38 and 39 are rejected under 35 USC 102(b) as being anticipated by the GSM/GPRS network shown and discussed in PCT Patent Document No. WO 97/26739 to Kari et al.

Claims 38 and 39 are rejected under 35 USC 103(a) as being rendered obvious by the GSM/GPRS network shown in Figs. 1 and 2 of U.S. Patent No. 6,463,275 to Deakin in view of U.S. Patent No. 6,496,690 to Cobo.

ARGUMENT

37 C.F.R. § 41.37(c)(1)(vii)

The Anticipation Rejection is Improper

The anticipation rejection of claims 38 and 39 (set forth in part 3 on pages 2-5 of the final Office Action dated January 12, 2007) asserts that the claims are anticipated by the GSM/GPRS network shown and described in PCT Patent Document No. WO 97/26739 to Kari et al (this network hereinafter referred to simply as "Kari"). Anticipation under 35 U.S.C. 102 is established only when it is shown that the prior art reference discloses, either expressly or under principles of inherency, each and every element of a claimed invention. See In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997); In re Paulsen, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994); and In re Spada, 911 F.2d 705, 708 15 USPQ2d 1655,

1657 (Fed. Cir. 1990). Appellants respectfully submit that the anticipation rejection fails to show that Kari includes a network element having each and every one of the combination of features recited in claim 38 or each and every one of the combination of features recited in claim 39.

Application Layer and Transport Layer Networks

More specifically, appellants submit that the rejection fails to show that Kari includes the recited features related to an application layer network, or to distinguishing an application layer network connection from a transport layer network connection. The final rejection appears to be based on two different rationales: 1) that the transport layer network, the application layer network, and the connections therein, are improperly recited in the appealed claims; and 2) that Kari includes the recited application layer network, and distinguishes an application layer network from a transport layer network connection.

First, the anticipation rejection fails to properly interpret and consider the application layer network related features recited in the claims. Indeed, in the final Office Action, it is stated that "none of the claims clearly and positively recites what is 'an application layer network' and or a 'transport layer network'" and that the interpretation of these features asserted by appellants "(i.e., **'what consists an application layer network and a transport layer network', or IP based telephony network**) are not recited in the rejected claim(s)" (underlining and emphasis in original). See pages 15-16 of the final Office Action. Appellants' remarks concerning the proper interpretation of the features are presented with respect to the second argument below. For the purpose of addressing the Examiner's first rationale, appellants point out that the present rejection is an anticipation rejection under 35 USC 102(b) rather than a rejection under 35 USC 112, first or second paragraph. Even so, the Examiner errs in attempting to support the anticipation rejection by arguing that the "broadly claimed limitation" are insufficient and that there are limitations that are not recited in the rejected claims. For example, the Examiner states: that "none of claims clearly and positively recites **how** these connections are setup over undefined networks" and that appellants' arguments as to the proper interpretation of the features are "irrelevant since no specificity . . . are being claimed." (underlining in original, emphasis added). See page 16 of the final Office Action. The complaint that the claims do not include the

details of "how" the application layer and network layer connections are made is not appropriate; the proper issue is whether Kari includes the features which are recited in the appealed claims.

It is not appropriate to refuse to consider the application layer network and related features recited in the claims, or to require that the claims themselves include the definition of the term. Indeed, when no explicit definition for a term is given in the specification, a term should be given its ordinary meaning and broadest reasonable interpretation attributed to it by those of ordinary skill in the art. MPEP 2111.01 III. It is submitted that the terms "application layer" and "transport layer" are terms well known to one of ordinary skill in the art. For example, Glitho (U.S. 5,875,328) defines application layer as follows:

> As the highest layer in the Reference Model of OSI, the Application Layer 260 provides a means for the application processes to access the OSI environment.

Glitho, page 6 lines 46-48. Glitho also provides a definition of "transport layer":

> The transport Layer 230 provides transparent transfer of date between session-entities and relieves them from any concern with the detailed way in which reliable and cost effective transfer of data is achieved.

Glitho, page 7, lines 6-9. The term "application layer" has been used by others without providing a specification definition of the term. See Hasan (U.S. 6,707,813)("It is important that any solution to the delay problem not require any changes to the call control protocol residing in the application layer. In other words, there should be a clear separation of the call control protocol in the application layer and the bit pipe that is provided by the operator for launching the call control applications." Hasan, page 3, lines 53-59 ; Forslow (U.S. 6,608,832), page 6, lines 54-59, reference an application layer and at page 11, lines 62 through page 12, lines 1-5. 1. See also ISO/IEC 7498-1 International Standard, Information Technology - Open Systems Interconnection - Basic Reference Model: The Basic Model; 1994-11-15; ISO/IEC, second edition.

Moreover, the rejection inappropriately attempts to require that the claims include further specificity of how connections with the transport layer network and the application layer network are setup, or other features. The appropriate analysis is to faithfully interpret the terms used in

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1 It should be noted that many of these references are found within the detailed description of the embodiment or detailed description of the drawings and Applicants' citation to then should not be construed as claim limitations. MPEP 2111.01

the claims. The limitations of the preferred embodiments described in the specification indeed should not be read into the claims. Since the claims recite an application layer network and connection therein, Kari would anticipate the claims if it had any such application layer network connection, and Kari need not have the details of the preferred embodiments in appellants' specification.

Secondly, not withstanding the apparent inconsistency with the first argument, the Examiner wrongly asserts that Kari does include the features of a transport layer connection and an application layer connection. See page 16 of the final Office Action. The final rejection erroneously alleges that the "combined system of near end MS, MSC, GGSN, SGSN, HLR Interent and far end MS" in Kari comprises a transport layer network and that the "combined system of near end MS, MSC, GGSN, SGSN, HLR Internet and far end MS" in Kari comprises an application layer.

The second argument is apparently based on a faulty conclusion that an application layer network connection is used "to transmit user traffic" and that a transport layer network connection is used "to transmit signaling/control for transport." There is no support or citation offered for such an interpretation. Furthermore, such an interpretation is inconsistent with the original specification and drawings of this application which define the transport layer network, and which also define the application layer network (as part of the architecture of an IP-based telephony network). See, for example, page 12, line 5, to page 14, line 5, of the specification. Thus, an application layer network can provide the same service with different transport layer networks, and with different transport bearers. The transport layer network and application layer network are thus defined to be independent of each other, with each network comprising different network elements.

Kari is directed to a method of billing what it refers to as "new" types of billing for GPRS service in a GSM network. The Kari patent is concerned with accomplishing any one of different types of billing for packet radio networks, such as GPRS. There is no IP-based telephony network and no application layer network in Kari. The billing done in Kari occurs entirely within the transport layer network. The Response to Arguments (see bottom of page 16 of the final Office Action) asserts that the application layer network related features can be found in Kari, however the noted parts relate to the GSM/GPRS transport layer network.

Charging Identification

Appellants also submit that the rejection fails to show that Kari includes the recited features related to an charging identification send from one of the application layer network and transport layer network to the other. The network element in claim 38 is configured to create a charging identification and send it so as to be used by a further network element in the other one of the application layer network or the transport layer network, to enable charging information for the elements to be coordinated. The network element in claim 39 is configured to receive the charging identification from a further network element operable in the other one of the application layer network or the transport layer network to enable charging information for the elements to be coordinated.

The anticipation rejection asserts that the IMSI identifier of the mobile station (MS) in Kari is a charging identification as recited in claims 38 and 39. However, the IMSI identifier is merely a known equipment identifier. The IMSI identifier is an attribute of the subscriber's equipment and is used merely to identify the subscriber's equipment. It is typically used for identifying the subscriber as being authorized to access the GSM/GPRS network. The IMSI identifier is permanently linked to the subscriber's equipment and is fixed by the subscriber's equipment. The rejection asserts that the IMSI is "asserted/created and used" as a charging ID in Kari, but there is simply no indication to that effect in the patent.

Furthermore, the IMSI identifier is not used to coordinate charging information between an application layer network and a transport layer network. The BGGSN in Kari does not perform any coordination of charging information for different network elements in Kari, much less one network element in an application layer network and another network element in the transport layer network as recited in claims 38 and 39.

The Obviousness Rejection is Improper

The final Office Action dated January 12, 2007 rejected claims 38 and 39 under 35 USC 103(a) as being rendered obvious by the GSM/GPRS network shown in Figs. 1 and 2 of U.S. Patent No. 6,463,275 to Deakin (this network hereinafter referred to simply as "Deakin") in view of U.S. Patent No. 6,496,690 to Cobo. Appellants respectfully submit that the obviousness

rejection fails to establish a prima facie case that the applied references teach a network element having each and every one of the combination of features recited in claims 38 and 39.

Deakin is directed to a method of billing in a GSM/GPRS network that facilitates various types of billing, such as hot billing (real-time billing) and pre-paid billing, in addition to normal billing. Deakin proposes that a subscriber or subscription specific Billing Class Identifier (BCI) be implemented as a new parameter in the Home Location Register (HLR) and used by a charging gateway to direct billing information to one of several different billing systems (see, for example, Fig. 2 and col. 2, lines 27-43, and col. 3, lines 24-37).

Same User Equipment Establishes First and Second Network Connections

Claims 38 and 39 recite that the same user equipment establishes both connections recited in the claims. In Deakin, the same user equipment does not establish two connections as recited in claims 38 and 39. The rejection itself refers to a "near end TE" and a "far end TE" as two different terminal equipments.

Application Layer Network

Even though Deakin may have two connections, it does not have one connection in a transport layer network and another connection in an application layer network. The final rejection asserts that the "combined system of near end TE, MSC/VLR, HLR, and far end TE" in Deakin is an application layer network. This is incorrect. The final rejection assumes that every GPRS network must necessarily have an application layer in addition to the transport layer. While it may be argued that GPRS network of Deakin could be modified to include an application layer, that of course is not the final rejection on appeal which is based solely on Deakin and Cobo.

Incidentally, it should be noted that the first reference source for consideration of the meaning of claim terms is the original specification and drawings of this application. As noted above, the specification of this application describes the application layer network as part of the architecture of an IP-based telephony network (at for example, page 12, line 5, to page 14, line 5, of the specification).

Create Charging Identification

The network element of claim 38 is configured to create "a charging identification". The final rejection asserts that the Billing Class Identifier (BCI) in Deakin is such a charging identification and is generated at NE1 or NE2 when the connection is requested/initiated for billing/charging. However, the BCI in Deakin is stored in the HLR and is just one parameter in the subscription data (see col. 4, lines 14-50).

There is simply no indication that the GGSN or SGSN in Deakin generates the BCI. Indeed, it is the Call Detail Records (CDRs) rather than the BCI that are generated by the GGSN or the SGSN (see col. 1, lines 58-63, and col. 3, lines 24-33, of the patent). The network element NE2 "passes" call detail records (CDRs) with billing class identifiers (BCI) to a charging gateway, which directs CDRs having appropriate billing class identifiers (in this example with BCIs of 1, 2 and 3) to respective billing systems (shown as A, B and C) (see col. 3, lines 34-36). Fig. 2 in Deakin shows that "CDR's with BCI" are sent from NE2 to the charging gateway. But this does not indicate the NE2 generated the BCI. To the contrary, Figs. 2 and 7 show that "subscriber data with BCI" is sent from HLR to NE1 and NE2, and this indicates that the BCI is already present in the subscription data before it is sent to NE1 and NE2. It follows therefrom that the BCI is not generated in NE1 or NE2.

Sending Charging Identification

Claim 38 further recites that the network element is configured to "send said charging identification from said network element so as to be used by a further network element in the other one of the application layer network or the transport layer network…" Claim 39 conversely recites that the network element is configured to "receive said charging identification from a further network element operable in the other one of the application layer network of the transport layer network…"

The final rejection acknowledges that Deakin does not explicitly disclose these features, but asserts that they are taught by the Cobo patent. But these features are not present in the Cobo patent. The Create PDP Context Request 83 in the Cobo patent is sent from the SGSN to the GGSN. The SGSN and GGSN in the Cobo patent are both in the transport layer network. Thus,

Cobo does not send a charging identifier from an element in one network to an element in the other network.

Secondly, one of ordinary skill in the art would not make the selective combination of Deakin and Cobo proposed in the final rejection. The final rejection asserts that it would have been obvious to send a charging ID to a GGSN node in the system of Deakin "so that it would provide a standardized method of providing a near real time account balance for subscriber's account and stopping the service when the balance reaches to zero; see Cobo col. 2, lines 5-14, 15-56; see col. 3, lines 34-39." When the applied references are considered as a whole, they do not suggest selectively modifying Deakin to include a small part of Cobo as proposed in the rejection.

The Cobo patent identifies a disadvantage that "there is no known method of providing prepaid subscriber service in a packet-switched network" and suggests it would be advantageous to have a standardized system and method of providing prepaid subscriber service in both circuit-switched and packet-switched radio telecommunications networks. (see col. 2, lines 6-12) Therefore, the teaching of the Cobo patent is applicable to the GPRS system in Deakin if and only if Deakin does not include a method of providing prepaid subscriber service. However, Deakin does include a method of providing a prepaid subscriber service (see Figs. 4, 5 and 7; col. 2, lines 45-52; and col. 3, line 51, to col. 4, line 54). Indeed, the Deakin patent itself teaches the advantage of providing pre-paid billing (see col. 1, lines 12-23) and col. 2, lines 57-67).

Thus, the Cobo and Deakin patent both identify the same disadvantage in the same prior art and both suggest a solution to it. The Deakin patent was filed on January 31, 2000 and was not issued (or otherwise made public) until October 8, 2002. The Cobo patent was filed on May 7, 1999 and was not issued (or otherwise made public) until December 17, 2002. In essence, each patent identified the same disadvantage in the same prior art and each patent proposed its own unique solution to that problem. One of ordinary skill in the art being aware of the two patents would adopt the whole of the solution proposed in one or the other of the patent, but to say (as the rejection does) that the Cobo patent teaches an improvement to the Deakin patent is incorrect.

It thus would not be obvious to selectively modify the solution set forth in Deakin to include the small portion of the solution set forth in the Cobo patent in the manner evidently proposed in the rejection.

Coordinating Charging Information

Claim 38 recites that the charging identification is sent "to enable charging information for the elements to be coordinated." Claim 39 similarly recites that the charging identification is received "to enable charging information for the elements to be coordinated."

In Deakin, the Billing Class Identifier is used to identify the billing class and to forward CDR's to the correct one of multiple billing systems. The network element NE2 passes CDRs with BCI to a charging gateway, which directs CDRs based on the BCI to the respective billing system. The charging gateway thus uses the BCI to determine whether the billing information is sent to billing system A, B or C. The BCI is not used to coordinate charging information between a transport layer network and an application layer network. The billing method in Deakin occurs entirely within the GSM/GPRS transport layer network.

CONCLUSION

For at least the reasons discussed above, appellants submit that the Examiner's January 12, 2007 final rejection of claims 38 and 39 is not proper. Appellants respectfully request that the Board reverse the Examiner's final rejection.

Respectfully submitted,
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Dated: October 8, 2008

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CLAIMS APPENDIX
37 C.F.R. § 41.37(c)(1)(viii)

APPEALED CLAIMS

38. A network element for use in coordinating charging information, the network element being configured to:

create call records and a charging identification for use in one of an application layer network or a transport layer network for a communications network having a billing system wherein a first connection is established in the application layer network by a user equipment using a call control protocol and a second connection is established in the transport layer network by said user equipment;

include the charging identification in the call records thereof;

send said call records to said billing system; and

send said charging identification from said network element so as to be used by a further network element in the other one of the application layer network or the transport layer network, to enable charging information for the elements to be coordinated.

39. A network element for use in coordinating charging information, the network element being configured for use in one of an application layer network or a transport layer network for the communications network having a billing system wherein a first connection is established in the application layer network by a user equipment using a call control protocol and a second connection is established in the transport layer network by said user equipment, said network element being configured to:

create call records for said second connection in said transport layer network;

send said call record to said billing system; and

receive said charging identification from a further network element operable in the other one of the application layer network or the transport layer network, to enable charging information for the elements to be coordinated.

EVIDENCE APPENDIX

37 C.F.R. § 41.37(c)(1)(ix)

NONE

RELATED PROCEEDINGS APPENDIX

37 C.F.R. § 41.37(c)(1)(x)

NONE